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BASCH & NICKERSON LLP
1777 PENFIELD ROAD
PENFIELD, NY 14526

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JASTRZAB, KRISANNE MARIE	
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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/074,992
Filing Date: February 13, 2002
Appellant(s): BURRIS ET AL.

Duane C. Basch
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 12/04/2006 appealing from the Office action mailed 03/03/2006.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

5,824,243	CONTRERAS	10-1998
5,207,993	BURRIS	5-1993

5,942,125 ENGELHARD ET AL 8-1999

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-5 and 7-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Contreras U.S. patent No. 5,824,243 in view of Burris U.S. patent No. 5,207,993.

Contreras teaches a water ozonating system having a corona discharge ozone generator coupled to a water reservoir and pressurized liquid circulation system, to dispense active, disinfecting ozonated water to the circulation lines of a dental operatory unit to kill microorganisms therein. A check valve is provided to ensure that water does not reach the ozone generator, pressure control means are provided including a pump for pressurized circulation of the ozonated water. Control means are further provided to control activation, operation and delivery of the water. Ozone is mixed with the water in the reservoir through a diffuser and the action of the pump means and a venturi. Off gas is captured and returned to the reservoir. See the abstract, column 3, lines 35-68 and column 4, lines 11-20.

Burris et al., '993 teach a water purification device for point-of-use application wherein there is a liquid source, a corona discharge ozone generator, hydrophobic means for preventing access to the ozone generator by the liquid, means for mixing the ozone and liquid, means for circulating the ozonated liquid, means for separating excess ozone gas from the ozonated liquid and destroying that excess ozone prior to atmospheric release, and means for maintaining the liquid source. Burris et al., '993

provide a positive pressure pump for mixing and circulating the ozonated water, while teaching the equivalence of static diffusers and venture means, as well. Burris et al., '993 teach the use of the device for provision within offices or compact location such as under sinks. See column 2, lines 40-68, column 3, lines 5-35 and 55-68, column 4, line 23 through column 5, line 35, and the figures.

It would have been well within the purview of one of ordinary skill in the art to employ the ozone off-gas destruction means of Burris in the system of Contreras, because it would provide for the safe disposal of that off-gas if the system requires abrupt shut-down which would not allow for the time consuming, natural dissipation of the off-gas as required by return of the off-gas to the reservoir.

With respect to claim 13, it would have been obvious to one of ordinary skill in the art to substitute the check valve protecting the ozone generator of Contreras with the porous, hydrophobic barrier means of Burris because it would provide a more simply means of protecting the generator irrespective of the pressure within the system and without mechanically moving parts.

Claims 1-5 and 7-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Engelhard et al., U.S. patent No. 5,942,125 in view of Burris '993.

Engelhard et al., teach substantially the invention as claimed, namely an ozone generator connected to a source of compressed air and a water line, with means to mix ozone and water to provide an active, ozonated water for distribution to the circulation lines of a dental operatory unit. Pressure control and monitoring means are provided as well as ozone sensors, and the operation of the system is controlled based on those

measured parameters. Off gas is sent through means to destroy any residual ozone prior to release to the atmosphere. Means are also provided to protect the ozone generator from contact with water. The ozone generator of Engelhard et al., is an UV generator. See column 2, lines 33-40, column 3, lines 35-68, column 4, lines 10-20 and lines 31-43, and column 5, lines 10-35.

Burris is applied as set forth above.

It would have been well within the purview of one of ordinary skill in the art to substitute the corona discharge ozone generation means of Burris for the UV generator of Engelhard et al., because of their conventionally recognized functional equivalence.

With respect to claim 13, it would have been obvious to one of ordinary skill in the art to substitute the check valve protecting the ozone generator of Engelhard et al., with the porous, hydrophobic barrier means of Burris because it would provide a more simply means of protecting the generator irrespective of the pressure within the system and without mechanically moving parts.

(10) Response to Argument

Appellant argues that Contreras teaches a continuous operation that is not properly combinable with Burris' batch system. Appellant alleges that the automatic replenishing function of Contreras is not a batch system, however the Examiner would disagree and would point out Contreras teaches periodic ozone replenishing only occurs if fresh water is added to the system which is certainly a batch system and the storage of the water is clearly taught indicative of a batch system. See column 2, lines 8-13 of Contreras.

Appellant also argues that the Examiner's motivation for including the venting and reducing means of Burris in Contreras is unclear. Appellant alleges that Contreras teaches away from the use of venting and reducing means as used in Burris because ozonated water itself is discharged by the system and as such no motivation exists to employ such means in the system of Contreras. The Examiner would maintain that clear motivation is present and identified. Burris clearly recognizes that ozone is an irritant to users and Contreras clearly identifies the potential for service requirements of the system employing quick-disconnect components. The presence of the venting and reducing means of Burris in the system of Contreras would ensure that the system is instantly serviceable and that users are protected from the potential release of any excess ozone without a waiting period equivalent to the natural dissipation period of ozone (approximately 20 minutes as supported by Contreras see column 3, lines 25-26). Contreras does teach the recycling of ozone off-gas and allowing for natural dissipation thereof, but also teaches the provision of quick-disconnect connections for system shut-down, combining those teachings with Burris' recognition of the irritating characteristics of ozone gas, leaves an obvious need to handle the ozone off-gas of Contreras differently at system shut-down and Burris teaches appropriate means to handle that occurrence. The Examiner would further note that proper motivation does not require an explicit verbatim recitation in a reference, but is proper based on the application of the teachings of the prior art.

Appellant again argues that the separation system claimed is not taught. Contreras does teach separation means as seen in the figure, line 26 is provided at the

top of tank 2 to separate the undissolved off-gas in the headspace from the ozonated liquid.

Appellant questions the motivation, particularly with respect to claims 12 and 13, to place barrier means and ozone reducing mean of Burris in the off gas line of Contreras because it would not longer provide for recycling as taught in Contreras. The Examiner agrees that it no longer allows for the recycle, but instead substitutes an off-gas handling arrangement that provides an enhanced safety aspect. The overall function and activity of Contreras is not destroyed by this substitution and proper motivation for it is supplied.

Appellant argues that recitations were provided in the Advisory that were not previously pointed out as basis for the rejections, however, the Examiner would maintain that all of those recitations were included in the original rejection and that the specificity in the Advisory merely repeats recitations previously provided in larger groupings in the rejections, in answer to Applicant's specific arguments in the after final response.

Appellant argues that the ozone sensor of claims 19 and 20 is not provided nor can it be found in the recitation of Burris column 2, lines 23-33 indicated in the Advisory. The Examiner would not that Appellant was directed to column 4, lines 23-33 in the Advisory, which clearly discusses the provision of an ozone sensor.

Appellant further argues with respect to claims 23 and 24, that while Burris does suggest the provision of a dryer, the dryer of an operatory unit is not suggested,

however, the Examiner would note that the claims are rejected under the combination of Contreras and Burris with Contreras teaching the use with a dental operatory unit.

Appellant further argues that the Examiner improperly relies upon Contreras in the rejection of the claims over Engelhard et al., in view of Burris, however, the Examiner would disagree with this position. The Examiner has not relied upon Contreras to motivate the substitution of the UV ozone generator of Engelhard with the corona generator of Burris, but merely as evidentiary that both UV and corona generators are recognized in the art as functional equivalents in the same field of endeavor. The Examiner would maintain and reiterate her position previously set forth. The Examiner pointed to Contreras merely as showing the state of the prior art recognition of the two generators' equivalence by explicitly stating such, and thus supporting the Examiner's assertion of the recognition in the art. The Examiner notes Applicant's submission of the "Ozone Reference Guide", as indicative of some variation in system requirements for the use of UV or corona discharge generators, however, the Examiner would maintain that such variations do not discount the fact that both UV and corona discharge generators form disinfecting concentrations of ozone and that the substitution is proper.

Finally, Appellant again argues that the limitations in the dependent claims are not identified in the rejections of record, however, the Examiner would continue to disagree and maintain that all claimed elements are addressed in the recited passages of the references set forth in the rejections.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Krisanne Jastrzab

Conferees:

Gladys Corcoran

JENNIFER MICHENER
QUALITY ASSURANCE SPECIALIST

Jennifer Michener